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# Appendix F:

## Estimates of Facility Cost

The following defines opinions of typical costs for off-road, water-based and on-road greenway facility development and management. Greenway projects can be developed as an element of other capital improvement projects, such as transportation improvements to roads, public works improvements for sanitary sewers or stormwater projects, or park and recreation improvements that might include a trails component. In these cases, the costs for greenway facilities are incorporated into the overall project budget, usually at a lower rate than for a stand-alone project.

The costs provided in this Appendix are for greenway facility development not associated with a capital improvement project. They are based on dollar amounts that communities across the nation are spending on greenway program development, management, maintenance and. The cost opinions are followed by examples of how other communities are receiving a return on their investment in greenways, in terms of reduced flooding costs, reduced costs for water quality improvements, increased tourism revenue and increased business attraction.

It is important to identify partnership opportunities with public sector agencies and private sector

organizations, as well as individuals who can serve to reduce the cost of implementing and managing greenways.

Potential short- and long-term cost savings associated with greenway implementation should be identified then weighed against the prevailing circumstances. For example, certain materials may be cheaper in the short term, but they cost more for maintenance or replacement in the long run. Another example is the cost for the eradication of exotic species in the greenway. With every year's growth of vegetation, costs will increase dramatically. However, the cost saved by eradicating sooner than later has to be balanced with the feasibility and expense of maintaining the cleared area.

### **F.1 GREENWAY FACILITY DEVELOPMENT COSTS**

Costs do not include those for land acquisition. Labor costs are included in facility estimates. Costs for engineering and design development are estimated at 10-15% of construction costs.

**Greenways with No Facility Development (Type 1):**

Vegetation	Unit Cost
Trees (1-3/4" caliper)	\$250 each
Shrubs (3 gallon)	\$25 each

\*Costs include plant and installation.

**Greenways with Limited Facility Development (Type 2):**

Trail Treads	
6-Foot Bare Earth Hiking/Mtn. Bike Trail	\$5 per foot
8-Foot Bare Earth Equestrian Trail	\$8 per foot
14-Foot Wood Deck/Boardwalk Trail (without rail)	\$150 per foot

\*Costs include site preparation, clearing, grading, and mobilization.

Signage	
Information Signs	\$1,000 each
Direction Signs	\$200 each
Warning Signs	\$200 each
Mile Marker Signs	\$250 each

**Greenways with Shared Use, Natural Surface Trail Facility Development (Type 3):**

Trail Treads	
10-Foot Aggregate/Stone Trail	\$12 per foot
14-Foot Wood Deck/Boardwalk Trail	\$150 per foot

Signage	
Information Signs	\$1,000 each
Direction Signs	\$200 each
Warning Signs	\$200 each
Mile Marker Signs	\$250 each

Furniture/Furnishings	
Benches	\$600 each
Trash Receptacles	\$400 each
Security Bollards	\$250 each
Bicycle Racks	\$500 each
Gates	\$750 each
911 Emergency Phones	\$1,000 each

Pre-Fabricated Steel Bridges	\$1,000 per foot
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**Greenways with Shared Use, Hard Surface Trail Facility Development  
(Type 4)**

Trail Treads	
10-Foot Asphalt Shared Use Trail	\$35 per foot
10-Foot Concrete Shared Use Trail	\$50 per foot
14-Foot Wood Deck/Boardwalk Trail	\$150 per foot

Signage	
Information Signs	\$1,000 each
Direction Signs	\$200 each
Warning Signs	\$200 each
Mile Marker Signs	\$250 each

Furniture/Furnishings	
Benches	\$600 each
Trash Receptacles	\$400 each
Security Bollards	\$250 each
Bicycle Racks	\$500 each
Gates	\$750 each
911 Emergency Phones	\$1,000 each
Drinking Fountains	\$2,500 each

Pre-Fabricated Steel Bridges	\$1,000 per foot
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### **On-Road Greenway Facilities (Level 5):**

#### **Restriping**

Conducted as part of a regularly scheduled roadway resurfacing project and does not include right-of-way acquisition and changes to signal actuation.

Bicycle Lanes	\$7,200/mile
Wide Outside Lanes	\$6,450/mile

#### **Independent Projects**

Listing is for development of facility type. Right-of-way cost estimates are provided as a general guide. Not all projects will require the acquisition of right-of-way. Real estate values fluctuate dramatically and will need to be adjusted on a parcel-by-parcel basis.

Share the Road Bike Route (signage)	\$15,000/mile
Urban Bike Lanes (5' wide, both sides)	\$250,000/mile
Paved Shoulders (4' wide, both sides)	\$150,000/mile
Wide Curb Lane (14' wide, both sides)	\$160,000/mile

#### **Other Bicycle Facilities**

Class I Bicycle Parking (Bicycle Lockers - per 2 bicycles)	\$500-\$1,500
Class II Bicycle Parking (Secure wheels and frame)	\$65 - \$150/bike
Class III Bicycle Parking (Inverted U's or rail racks)	\$65 - \$80/bike
Bike Route/"Share the Road" Sign	\$250/sign

### **Typical Costs for Pedestrian Facilities**

Sidewalks (60" wide, 2 sides)	\$100,000/mile
Pedestrian Signal Heads	
For 2 Corners	\$1,800
For 4 Corners	\$3,700
Prefabricated Bridge Overpass	\$200/square foot
Constructed Bridge Overpass	\$125/square foot
Crosswalk Striping	\$250 each
Curb Extensions	\$4,500 each

## F.2 FACILITY MAINTENANCE COSTS

The following maintenance costs are provided as a guide to establishing a budget for the operation, maintenance and management of each trail segment within the greenway system. These costs are derived from national industry averages and have not been adjusted to reflect unique labor, material and cost issues within Lexington-Fayette County, Kentucky.

It may be possible to lower the cost of maintaining one mile of paved trail through the development of an Adopt-a-Greenway Program. Volunteers have been proven effective in performing some of the routine maintenance activities that are listed below. Savings of 50% of the estimated cost per mile defined below are possible through a coordinated and well-run Adopt-a-Greenway Program, and some of these costs are already being covered along highways, roads, parks, and other areas.

### **Typical Maintenance Costs (For a One-Mile Paved Trail)**

Drainage and Storm Channel Maintenance (4 x/year)	\$500
Sweeping/Blowing Debris Off Trail Tread (20 x/year)	\$1,200
Pick-up and Removal of Trash (20 x/year)	\$1,200
Weed Control and Vegetation Management (10 x/year)	\$1,000
Mowing of 3-Foot Grass Safe Zone Along Trail (20 x/year)	\$1,200
Minor Repairs to Trail Furniture/Safety Features	\$500
Maintenance Supplies for Work Crews	\$300
Equipment Fuel and Repairs	\$600
Total Maintenance Costs per Mile of Paved Trail	\$6,500
Re-Surfacing of Paved Trail Tread (20-year cycle)	\$50,000/mile